IN THE SPECIFICATION

1. Please amend the fourth paragraph at column 1 of the specification as follows:

When driving a sled motor for transferring a pickup of the compact disk drive radially across the disk, the rotation of the sled motor is controlled using a general frequency generator with a predetermined number of tracks in the disk corresponding to a single pulse generated from the frequency generator. For example, if a compact disk drive is designed such that a constant number of track zero crossing signals are always generated on the basis of a single rotation of the disk, due to manufacturing tolerances encountered during commercial production of the disk, the width of the pitch formed on the disk may vary between 1.4 μm to 1.8 μm, which are smaller and greater than the preferred standard pitch of 1.6 μm, respectively. That is, since the width of the pitch is not uniform, a different number of track zero crossing signals is generated for each disk. In addition, the difference in pitch causes an error in calculations performed during a track searching operation.

2. Please amend the fourth and fifth complete paragraphs at column 2 as follows. The amendments previously made have been incorporated:

It is still another object to provide a disk calibration process and disk drive, for increasing the [setting] accuracy [of] in setting the track number of a disk and improving efficiency when using a memory by minimizing the error in calculation of the track number when a pickup searches the [disk] disks' tracks on the memory in the disk drive.

To achieve these and other objects, there is provided a disk calibration and search process and apparatus for a disk drive, in which, after an initialization step, a pickup is jumped to a first position and moved radially in a predetermined direction in response to pulses generated by a frequency generator. During this radial movement the number of

tracks crossed [are] is counted. The counting is continued until a predetermined number of the pulses generated by the frequency generator have been generated. A calculated frequency generator track number is then obtained by dividing the counted number of tracks by the predetermined number of pulses generated by the frequency generator, ie., calculating a unit track number of the disk per a single movement of the pickup, that is, the number of tracks the pickup moves per pulse generated by the frequency generator. The calculated frequency generator track number is stored in memory used to control the frequency generator for jumping the pickup during a search for a target track. An average pitch between the tracks is calculated in accordance with the calculated unit track number; and a moving amount of a drive to jump the pickup from a current position to a target track is then determined.

3. Please amend the last paragraph at column 2, which is bridging columns 2 and 3, as follows. The amendments previously made have been incorporated:

Also, the disk calibration apparatus and process contemplates performing a searching operation by jumping the pickup from the current position to the target track. Here, the searching operation may be performed by jumping the pickup to a target track to check the track number [to] of the target track, thereby initializing the track number with the checked track number; reading from the track the current location of the pickup on the disk and calculating the number (X) of tracks existing between the current position and the target track, where (X) is the [track] number [(X)] of tracks to be jumped by the pickup; determining whether a long jump [of] by the [pick up] pickup is required or not; performing a short [jumping of] jump by the pickup and determining whether the pickup jumps to the target track if it is determined in the searching operation that the long jump is not required; adjusting the initialized track numbers to the target track and returning the process to the step of reading the current location of the pickup on the disk if it is determined that the pickup has not jumped to the target track; checking whether the track number to the target track is equal to a value obtained by adding one to the initial value if it has been determined that a

long jump is required; dividing the track number (X) to be jumped by the pickup by the initialized track number to the target track, the initialized track number being obtained from the pitch if the track number to the target track is not equal to a value obtained by adding one to the initial value and moving the driving means of the pickup on the basis of the value obtained; and readjusting the track number by regulating an average pitch if it has been determined that the track number to the target track is equal to a value obtained by adding one to the initial value.

4. Please amend the third paragraph at column 5 as follows:

FIG. 5 is a flowchart depicting a first subroutine performed by microprocessor 41 for disk calibration. When a disk is replaced by a new disk or the CD-ROM drive is reset, the CD-ROM drive initializes itself, step 51. Here, the term "initialization" means a chain of processes for starting such operations as focusing, tracking, and motor servo control. After initialization is completed, pickup 14 of the disk drive jumps to an inner circumference of the disk, that is, to a predetermined initial position, step 52, such as the track lead-in area. Then, while pickup 14 of the disk drive jumps towards the outer circumference of the disk, step 53, a counter (not shown) installed in microprocessor [14] 41 counts, step 54, the number of pulses generated from frequency generator 12 in accordance with the rotation of sled motor 11. Here, the track number can be counted by counting the pulse number. It should be noted, however, that the counting operation is delayed for a predetermined period (e.g., 500 μsec), in order to stabilize the pickup 14 after the initial jump in step 52. Also, since the pulse is counted on the basis of the edge of the pulse, [it is checked, step 55,] a check is made during step 55 to determine whether the starting point of the pulse counting is the edge of the pulse, prior to the actual counting of the number of pulses generated from [the] frequency generator 12. When the starting point of the pulse counting is not the edge of the pulse, the counter existing in [the] microprocessor 41 continuously checks whether the starting point is the edge of the pulse. When the starting point is the edge of the pulse,

it is checked whether a track is detected by pickup 14, step 56. When a track is not detected by pickup 14, microprocessor 41 continuously checks pickup 14 for the detection of a track.

5. Please amend the last paragraph at column 5, which is bridging columns 5 and 6, as follows. The amendments previously made have been incorporated:

For each track detected by pickup 14, a counter accumulatively sums the number of the tracks detected, step 57. Thereafter, [it is checked] a check is made to determine whether the pulse number counted by the counter of [the] microprocessor 41 is equal to or greater than 160, step 58. Here, the number 160 was determined based on the data which is obtained through 8 full rotations of the disk during all experimental procedures using the CD-ROM drive system designed so that frequency generator 12 generates 20 pulses per one rotation of the disk. If the pulse number is not equal to or greater than 160 in step 58, the processes are repeated from step 56. Otherwise, when the pulse number is equal to or greater than 160, a frequency generator track number (Z) is calculated by [diving] dividing the summed track number by 160, step 59,[,] ie., microprocessor 41 calculates a unit track number of the disk per a single movement of pickup 14, that is, the number of tracks the pickup moves per pulse generated by the frequency generator. The calculated track number (Z) is stored (set) in program memory 43, step 60, and the process returns to a root program in microprocessor 41 in order to perform another routine. Microprocessor 41 also calculates an average pitch between the tracks in accordance with the calculated unit track number.

6. Please amend the fourth complete paragraph at column 6 as follows. (The amendments previously made have been incorporated:

On the other hand, if it is determined in the step 64 that the long search (i.e., a "long jump") is required, a check is made to determine whether the track number to the target track

is equal to a value obtained by adding one to the initial value of the number of tracks (X) to be jumped, step 68. If the track number is not equal to the value obtained by adding one to the initial value, the [track] number of tracks (X) to be jumped by the pickup is divided by the [initial] unit track number [to] for the [traget] target track, step 69 to obtain a value (Y). Then, in step 70, the sled motor 11 is rotated in accordance with a pulse number converted from the value (Y) obtained in [the] step 69, and then the process proceeds to step 66 discussed above.

7. Please amend the last paragraph at column 6, which is bridging columns 6 and 7, as follows:

On the other hand, when it is determined in step 68 that the track number to the target track is equal to the value obtained by adding one to the initial value, a second subroutine for adjusting the track number is performed, step 71, and then the process proceeds to step 69 discussed above. Here, this second subroutine for adjusting the track number is for compensating for a search error generated during the search subroutine performance due to a defect of the disk.

8. Please amend the first complete paragraph at column 7 as follows:

The process of this second subroutine for adjusting the track number will be described with reference to FIG. 7. First, the current jumping direction and the previous jumping direction are compared (step 81). Then, it is checked whether the current jumping direction is the same as the previous jumping direction (step 82). If the current jumping direction is the same as the previous jumping direction, a value (U) is obtained by dividing the track number (X) to be jumped by [the] pickup 14 by 100. Here, the numeral "100" is arbitrarily set for the convenience of calibration with regard of 300~400 error tracks. The value (U) is added to a value (P) obtained by accumulatively summing the values (U) to set a new value

(P) (step 83). Then, it is determined [that] whether the newly set value (P) is over 100 (step 84). If the newly set value (P) is over 100, a value obtained by adding one to the frequency generator track number (Z) is set as a new frequency generator track number (Z) and the value (P) is set as zero. This adjusted frequency generator track number is stored in the microprocessor 41. Otherwise, if it is determined in the step 84 that the value (P) is not over 100, the process returns to the root program.